**Draft ESIP Education Committee Budget Proposal August 2014**

The ESIP Education Committee Budget Proposal is composed of four components which are designed to reach out more effectively to educators with ESIP resources while continuing our commitment to deep engagement with educators at ESIP, in addition to supporting the development of a diverse community of ESIP members. The proposal includes two new initiatives which leverage existing networks in the target community ESIP Education is trying to reach, as well as proven approaches to encourage participation through community challenges.

Program Components include:

* Project 1 - Institutional Affiliation with NESTA with Teacher Workshops - $3,700
* Project 2 – ESIP/NESTA Web Seminar Summer Session: Helping Teachers Bring ESIP Member Data into the Classroom - $6350
* Project 3 – ESIP Educator Challenge - $1,500
* Project 4 – Support for Graduate Student Presentation at SACNAS - $1,000

Total Budget Request - $12550

If the money for a particular project isn't used for the specific purposes identified here, it is re-allocated to the ESIP general fund, not repurposed without being approved by FiCom.

**Project 1 - Institutional Affiliation with NESTA with Teacher Workshops**

**Project Description**

1. Community Need

ESIP Education Community seeks an effective way to reach out to a larger audience of Earth and space science and environmental science educators with resources available through the ESIP community. Becoming an institutional affiliate of NESTA will provide a way to significantly increase our engagement with the Earth science education community, getting the word out about our resources and programs, leveraging their publications regularly, be recognized as a resource to educators nationally, and also to participate in community building activities.

As a component of this affiliation, we will continue to collaborate with NESTA on the development of a teacher professional development workshop on the use of ESIP data in the context of the Next Generation Science Standards at the three fall 2015 National Science Teachers Association (NSTA) area conferences and the spring 2016 national conference (the NESTA-ESIP Data Workshop for Earth and Space Science Educators, or NESTA-ESIP Data Workshop for short). NESTA has a proven approach for offering professional development for educators that is well received, and is well attended by teachers. Through this collaboration, we will be able to offer the workshop at all four conferences, as a component of NESTA’s suite of workshops at the conferences, and provide professional development to a minimum of 120 teachers during the year. This approach dramatically decreases the cost of offering professional development for teachers (to less than $20/teacher assuming 120 teachers at the four conferences) because it leverages the same workshop content at multiple venues and also does not require funding for teacher participation (either in travel, materials, or stipends). The workshop will be designed so that local ESIP community members will have the opportunity to participate as a co-presenter on the presentation team, if they are available and interested. Alternatively, the workshop can be presented by NESTA leaders presenting at the workshop.

1. **Strategic Goal**

The activities made possible as a result of this affiliation align with the ESIP Education Committee’s mission “to increase the quality and value of Earth science products and services for the benefit of science and society” as well as promoting and facilitating “the development, dissemination, and use of Earth science educational products, information, and tools to a broad user community using the wealth of Earth science data and knowledge available in the ESIP Federation.”

NESTA is the largest professional society of K-12 Earth and space science educators nationally, and is the target community that ESIP needs to reach to share information about its resources, programs, and opportunities. The project also aligns with ESIP Education Strategic Goal #1 - Elevate the visibility of the ESIP Federation education community’s capabilities to ESIP partners and educators, scientists, and technologists in the broader Earth system science community.

1. **Leverage**

This affiliation will leverage ESIP’s educational resources as well as NESTA’s reach to significantly broaden the opportunity to reach large numbers of teachers through NESTA’s network and publications with ESIP educational resources. Participation in the NESTA Partners Leadership Conference will provide a venue to address developing issues in geoscience education with other organizations seeking to improve geoscience education, increasing leverage further through the collaborations that develop there. Participation of ESIP at the Gold level will provide opportunities for the ESIP Education Committee to provide advice about future activities of NESTA, leading to future opportunities for collaboration on project with NESTA and other leading geoscience education organizations. Collaboration with NESTA on a data workshop to be offered four times in fall 2015 and spring 2016 will build on NESTA’s network and successful model for professional development, leveraging it to efficiently get ESIP’s message out to teachers.

1. **Collaborators**

ESIP members (including ESIP Education Committee Members) will be able to participate in activities through presentations at workshops, as well as through publications and announcements to the NESTA network.Additional institutional collaborators will be made available through the NESTA Partner Leadership Conference, including major organizations working in geoscience and environmental science education across the country (such as AGU, AMS, NCSE, AGI).

**Proposed Budget - $3700**

**Budget Justification:** Structure for Institutional Affiliation provided by NESTA (see attachment)

**Project 2 - ESIP/NESTA Web Seminar Summer Session: Helping Teachers Bring ESIP Member Data into the Classroom**

1. **Project description**

This project serves two objectives:

* to develop a series of three web seminars offered for teachers between July and September on a monthly basis with a focus on using data in the Earth and space science classroom, and
* to provide professional development for members of the ESIP community on the needs of K-12 Earth and space science teachers, and how to best address those needs in web seminars.

A team of collaborators will build on expertise in ESIP and in NESTA and work together to provide guidance to and support for the ESIP community member in developing their web seminar presentation and facilitate offering the web seminars during the summer. The team working on each web seminar will include the project lead, an ESIP community member (who will be the “presenter”), a teacher coach (drawn from NESTA leadership), an ESIP Education Committee facilitator, and the NESTA Programmer.

The team will work together to ensure that the web seminars address curriculum needs of Earth and space science educators at the middle and/or high school levels, and will be guided by Next Generation Science Standards performance expectations. Each web seminar will provide both background content as well as activities that can be immediately used in the classroom without extensive training. The web seminars will leverage the developing emphasis in NESTA on web seminars, and will be publicized through ESIP and NESTA’s network, publications, and events. The project lead and a NESTA leader will jointly offer a workshop at the ESIP summer conference that focuses on helping technologists communicate their data to teachers and highlights the activities underway in this testbed.

1. **Project plan, budget, and timeline**
   1. **Project Plan**
      1. Survey teachers to identify their primary needs and concerns regarding use of Earth science data in the classroom and NGSS
      2. Develop detailed schedule of web seminars and presenters
      3. Develop presentation template
      4. Promote web seminar series through NESTA, ESIP, and other list-serves
      5. Offer web seminars on a monthly schedule through September
   2. **Timeline:** 
      1. May - Survey teachers for data related topics for K-12 classroom, develop schedule, organize sequence of presentations, develop template
      2. June – Develop first presentations and publicize; meet periodically with team in conference calls to iterate on presentations
      3. July - Education workshop on NESTA communication method
      4. July - September - Develop and deliver three presentations (one per month) with embedded surveys to assess their interests, satisfaction, needs, and suggestions
   3. **Budget**
      1. $250 Honoraria for ESIP community member presenter x 3 web seminars
      2. $250 Honoraria for Teacher Coach to work with presenters (NESTA leaders) x 3 web seminars
      3. $250 Honorariums for ESIP Education Committee Facilitator x 3 web seminars
      4. $400 software costs (webinar, survey)
      5. $1200 Project lead
      6. $600 NESTA Programmer
      7. $1900 Travel support and registration for NESTA Leader to ESIP summer conference  
         Total requested - $6350
2. **Names and descriptions of roles for team members**  
   1. **Project lead** - Roberta Johnson - will lead development of needs and concerns survey and its implementation, develop schedule of web seminars, presenters, presentation template, and work with coaches and presenters to iterate on presentations. She will work to promote the web seminars through NESTA, ESIP, and other list-serves.
   2. **ESIP Community Member Presenters** - Our first presenter has been identified as Robert Downs. We will work to identify two additional presenters that are looking for this opportunity to develop effective web seminar presentations for the K-12 audience.
   3. **Teacher Coaches** - for presenters will be drawn from NESTA leadership with extensive experience in professional development for K-12 teachers. They will work with the project lead and the presenters to provide recommendations on how presentations can be optimized for the K-12 audience in a web seminar format, and will also help facilitate the web seminars, working with the project lead and NESTA programming staff.
   4. **ESIP Education Committee Facilitators -** whose role is to help inform the group of ESIP goals, relationships, activities, and what's been done in the past
   5. **Programmer** - Dr. Julia Genyuk - NESTA programmer and web seminar support, will provide support for web seminars, and will make web seminars available as videos. She will also implement Special Alerts to announce web seminars through the NESTA network, and provide support for NESTA calendar and newsletters, which will get the word out about the web seminars.
3. **Any special skills or intended outcomes that the proposer can bring to the task**
   1. **Skills:** Members of the Education Committee have significant experience in the K-12 classroom and are expert boundary spanners between the ESIP community and K-12 educators. NESTA is a leading provider of Earth and space science professional development for teachers and has recently launced a new series of web seminars using GoToWebinar on space science and astronomy (including using authentic data in astronomy). The project lead, who is also the executive director of NESTA, has offered hundreds of professional development workshops for teachers in multiple formats, including in-person, online courses, and web seminars.  
        
      This project will build on lessons learned and NESTA’s community of teachers will work to bridge the divide between the expertise that the ESIP community brings around Earth science data and information and the needs that teachers have to use those resources in the classroom.
   2. **Outcomes:** Three webinars will be developed, offered, and posted for further access using Earth Science data for the classroom, including associated lesson plans for classroom implementation. The project will result in a growing community of teachers interested in ESIP members data and tools. The project will also provide a forum for ESIP members to share their data and tools with users, and develop expertise in sharing their resources effectively with teachers. They will also have a recorded webinar that they can share on their own website and they will be able to link to all of the lessons that were created based on the webinar
4. **The ultimate benefit that your solution brings to the ESIP community**
   1. ESIP has seen death by PowerPoint in a number of ways. This project will provide a professional development opportunity to ESIP community members on how to repurpose content they already have in ways that can be consumed by K-12 educators in ways that are relevant to the teacher, including the elements they need to effectively transition the experience into the classroom. Key aspects of our approach are inclusion of relevant hands-on activities that can be explained and demonstrated in the webinar, as well as demonstration of online data resources that are closely connected with the hands-on activity, in a clearly presented scientific context relevant to teacher curriculum needs.
   2. The K-12 educators will get useful resources for their science classrooms and will be able to engage their students with real, Earth science data. The project will further develop the collaboration between NESTA and ESIP, building on the strengths of each, and providing opportunities to learn from each other. Finally, the project will provide additional opportunities to broaden ESIP’s access to K-12 teachers, further developing opportunities for enhanced Earth system science literacy.

**Proposed Budget:** $6350

**Project 3 - ESIP Educator Challenge**

The Education committee proposes to create an Educator Challenge to promote the use of ESIP Earth science data, information and educational resources to a broader audience of both traditional educators and non-traditional educators (museums,... ) The challenge invites educators to take ESIP resources and create and implement lesson plans that utilize ESIP member resources. Educators will then create a blog post that explains their lesson to be posted on the ESIPFed.org blog. The ESIP Education committee will review all submissions and vote on their favorite in two categories (classroom (including virtual) and non-traditional). Institutional affiliation with NESTA (Project 1) will be of major assistance in helping to implement the ESIP Educator Challenge, due to their large network of educators.

**Community Need**

Currently, there is a gap between the technical practioners and ESIP educators, but there is tremendous potential value in bridging the gap between ESIP generated data and potential learners in the wider world. In addition, the broader community of science educators would benefit from greater exposure to ESIP produced educational resources.

**ESIP-Fed. Strategic Goals being met by the proposal**

GOAL 1: Be the primary facilitator, coordinating body and advisor to promote the use of Earth science data and information.

GOAL 5: Expand public awareness about the importance and value of Earth science and Earth science information systems.

**Leveraged Activities**

This contest will leverage ESIP member created Earth Science data products and education resources and expose these resources to a broad audience of classroom and non-traditional educators. The contest will also provide content for the ESIP blog - drawing additional readers and building a broader community bridging the gap between educators and technical practioners. Finally, the contest will begin to develop a repository for educational tools and resources developed for and by the ESIP Community.

The contest will provide incentives for teachers to build on the new science standards and may leverage existing NESTA activities that are in place to educate teachers on these standards.

**Collaborators**

ESIP Education Committee members, ESIP member organizations who create educational resources, ESIP Teachers (Teachers who have attended ESIP-Supported Teacher Workshops at the summer meetings), educators not yet connected to the ESIP-Fed.

**Proposed Budget:** $1500

**Proposed Budget Justification**

If this proposal is funded, The ESIP Education Committee will grant two cash awards in each of two categories (four grants altogether). One award category would focus on classroom and virtual educators, the other on informal and non-traditional educators.

**1. Classroom Education:**

ESIP Educational **Innovator Grant:** Submit a standards-based unit consisting of at least three classroom lesson plans or three virtual learning activities that use one or more ESIP resources.  *($500 award)*

    Preference will be given to submissions that:

         -are student-tested

         -incorporate Next Generation Science Standards (NGSS)

         -are ready to be used by other teachers/educators

**ESIP Educational Leader Grant:** Submit a singe lesson (virtual or classroom) that effectively uses one or more ESIP resource to teach a standards-based lesson. *($250 award.)*

**2. Non-Traditional, Informal, and Out of School Time Education:**

**ESIP Educational Designer Grant:** Use published ESIP educational resources or websites to design an educational program that supports an organization's educational goals and/or learners' educational needs. Submit a complete and detailed description of how you used the resources, and a formal evaluation of the program's impact on learners. *($500 award)*

    Preference will be given to submissions that:

         -are user-tested and evaluated

         -incorporate more than one ESIP educational resource

         -are ready to be used by other educators, programs or organizations

**ESIP Educational User Grant:** Use a published ESIP educational resource or website (resources can be found here) to support an organization's educational goals and/or  learners' educational needs. Submit a description of how you used the resource in your work as an educator, and an informal evaluation of the resource's impact on learners. *($250 award)*

**Project 4 – ESIP Graduate Student Scholarship**

Provide one ESIP geosciences award to SACNAS graduate student

Project Description:

A) Community Need. Hispanic, Chicano and Native American scientists are underrepresented in geosciences in general and the ESIP Federation in particular. SACNAS is devoted to advancing Hispanics, Chicanos and Native Americans in Science.

B) Strategic Goals. Sponsoring a SACNAS graduate student award supports the Federation strategic goal, “To develop collaborative relationships with other organizations involved in Earth science related educational activities.” (ESIP Federation Bylaw V, Section 6)

C) Leverage. ESIP Teacher workshops leverage the efforts of any and all ESIP Federation partners in their efforts to promote and increase diversity within their organizations and partnerships.

2. Proposed Budget: $1000

3. Budget Justification:

Approximately 1,500 undergrad & grad students attend the SACNAS annual conference. With sponsor support, SACNAS recognizes exemplary graduate student oral presenters for the quality of their research & presentation skills. Award sponsors make these honors possible. The majority of the awards are given in the Biological and medical sciences. Providing an award in the goeosciences category encourages student research in the geosciences, and provides the ESIP Federation another avenue to recruit high-quality graduate students for the student fellowship program.